Bachelor of Science Program in Physics

General Information

Degree Designation : Bachelor of Science Program in Physics

Total Credits : 136 credits

Graduate : 4 years

Academic Year

The academic calendar mostly consists of two semesters (Two-semester system). Each semester is not less than 15 weeks. The summer session is scheduled to meet the requirements of each

1 st semester : June - September

2 nd semester : November – February

Summer semester : March – May

Course Structure

A : General Education Course

B : Major Course

C : Free Elective Course

A : General Education (30 credits)

1. Language and Communication (9 credits)

- Fundamental Course (6 credits) :

Course ID	Course name	Credits
1551001	Fundamental English	3(3-0-6)
1551002	English for Communication	3(3-0-6)

- Free Elective (3 credits) :

1541001	Thai Language Usage Skills	3(3-0-6)
1541002	Language and Communication for Specific Purposes	3(3-0-6)
1561001	Japanese for Communication	3(3-0-6)
1571001	Chinese for Communication	3(3-0-6)
1571002	Fundamental Chinese for Tourism	3(3-0-6)
1661001	Korean for Communication	3(3-0-6)
1691001	Fundamental Burmese	3(3-0-6)
1691002	Burmese for Communication	3(3-0-6)

2. Humanities (6 credits)

Course ID	Course name	Credits
1001003	Human Behavior and Self-Development	3(3-0-6)
1001005	Thinking and Decision Making Skill	3(3-0-6)
1511001	Ethics and Human Beings	3(3-0-6)
1511002	Facts of Life	3(3-0-6)
1521001	Buddhism	3(3-0-6)
1631001	Information for Study and Research	3(3-0-6)
2011001	Aesthetics of Visual Arts	3(3-0-6)
2051001	Aesthetics of Performing Arts	3(3-0-6)
2061001	Music Appreciation	3(3-0-6)
3501001	Leadership Development	3(3-0-6)
3501003	Personality Development and the Arts of Socializing	3(3-0-6)

3. Social Sciences (6 credits)

Course ID	Course name	Credits
2501001	History of Thai Society and Culture	3(3-0-6)
2501003	Public Mind and Civic Social Engagement	3(3-0-6)
2501004	Interdisciplinary Social Science for Development	3(3-0-6)
2501005	Kamphaeng Phet Studies	3(2-2-5)
2521001	Globalization and Localization	3(3-0-6)
2521002	ASEAN Studies	3(3-0-6)
2541001	Human Beings, Community, and Environment	3(3-0-6)
2541002	Local Resource Management	3(3-0-6)
2551002	Fundamental Knowledge on Thai Politics and Government	3(3-0-6)
2561001	Introduction to Laws	3(3-0-6)
3501004	Business Initiation	3(3-0-6)
3531001	Finance in Daily Life	3(3-0-6)
3541001	Entrepreneurship	3(3-0-6)
3591002	Sufficiency Economy	3(3-0-6)

4. Mathematics, Science, and Technology (6 credits)

Select courses in subjects 1. - 4. (3 credits)

Course ID	Course name	Credits
1161001	Sports and Recreation for Quality of Life	3(2-2-5)
1161002	Exercise for Health	3(2-2-5)
4001002	Science and Technology for Daily Life	3(3-0-6)
4001003	Environments and Natural Resources Conservation	3(3-0-6)
4071001	Health and Health Care	3(3-0-6)
4091001	Mathematics in Daily Life	3(3-0-6)
4091003	Mathematics and Decision Making	3(3-0-6)
4121001	Computer and Information Technology	3(2-2-5)
4121005	Website Design and Development	3(2-2-5)
4121006	Package Software for Application	3(2-2-5)
5001001	Agriculture in Daily Life	3(3-0-6)
5071001	Food for Health	3(3-0-6)
5501001	Technology in Daily Life	3(3-0-6)

B : Major Course (100 credits)

Core subjects (26 credits)

Course ID	Course name	Credits
4011101	Physics and Laboratory 1	4(3-3-7)
4011102	Physics and Laboratory 2	4(3-3-7)
4021101	Chemistry and Laboratory 1	4(3-3-7)
4021102	Chemistry and Laboratory	4(3-3-7)
4031103	General Biology and Laboratory	4(3-3-7)
4091401	Calculus and Analytical Geometry 1	3(3-0-6)
4092401	Calculus and Analytical Geometry 2	3(3-0-6)

Major Requirement (43 credits)

Course ID	Course name	Credits
4012201	Mechanics 1	4(3-3-7)
4012202	Electricity and Magnetism 1	4(3-3-7)
4012203	Physics of Waves	4(3-3-7)
4012301	Mathematics for Physics 1	3(3-0-6)
4012501	Computer Language for Physics	2(1-2-3)

4013201	Thermal Physics	3(3-0-6)
4013202	Quantum Mechanics 1	3(3-0-6)
4013203	Nuclear Physics 1	4(3-3-7)
4013401	Modern Physics	4(3-3-7)
4013501	Electronics 1	3(2-2-5)
4013701	Physics of Earth and Space	3(2-2-5)
4013901	Seminar in Physics	2(1-2-3)
4014901	Research Project in Physics	4(1-6-6)

Major Elective Course (18 credits)

Course ID	Course name	Credits
4011103	General Physics and Laboratory	4(3-3-7)
4012302	Mathematic for Physics 2	3(3-0-6)
4012502	Applied Microcomputer in Physics	3(2-2-5)
4012503	Fundamental Biomechanics	3(3-0-6)
4012601	Practical Workshops	1(0-3-1)
4012701	Astronomy and Space	3(3-3-6)
4013204	Mechanics 2	3(3-0-6)
4013205	Electricity and Magnetism 2	3(3-0-6)
4013206	Quantum Mechanics 2	3(3-0-6)
4013207	Nuclear Physics 2	3(3-0-6)
4013208	Sound	3(3-0-6)
4013209	Optics	3(3-0-6)
4013402	Introduction to Materials Science	3(3-0-6)
4013502	Electronics 2	3(2-2-5)
4013503	Electronics Measuring Instrument	3(2-2-5)
4013504	Electronic Circuits Design	3(2-2-5)
4013505	Instrument and Control System	3(2-2-5)
4013506	Electrical Machines	3(2-2-5)
4013507	Introduction to Nano science and Nanotechnology	3(3-0-6)
4013508	Rubber Properties in Physical Test	3(2-2-5)
4013509	Strength of Materials	3(2-2-5)
4013510	Introduction to Metrology	3(2-2-5)
4013511	Introduction to Scientific Photography	3(2-2-5)
4013601	Instrument for Research Workshop	1(0-3-1)

Course ID	Course name	Credits
4013602	Solar Energy	3(2-2-5)
4013603	Construction of Physics Materials	3(2-2-5)
4013702	Astrophysics	4(3-3-7)
4013703	Geophysics 1	3(2-2-5)
4013704	Atmospheric Physics	3(3-0-6)
4013902	Research Methodology	3(3-0-6)
4014201	Solid State Physics	3(3-0-6)
4014301	Statistical Physics	3(3-0-6)
4014401	Physical Spectroscopy	3(3-0-6)
4014402	Radiology	3(3-0-6)
4014403	Atomic Spectra	3(3-0-6)
4014404	X-Ray Crystallography	3(3-0-6)
4014501	Digital Electronics	3(2-2-5)
4014502	Digital Electronics and Interfacing	3(2-2-5)
4014503	Microcontroller	3(2-2-5)
4014504	Physics Teaching Methods	3(3-0-6)
4014701	Geophysics 2	3(3-0-6)

Language and Communication Skills Science (6 credits)

Course ID	Course name	Credits
4002251	English for Sciences	3(3-0-6)
4013512	English for Physics	3(3-0-6)

Professional Experience or Cooperative Education (7 credits)

Select a plan

Course ID	Course name	Credits
4014801	Preparation of Field Experiences in Physics	2(90)
4014802	Field Experience in Physics	5(450)
or		
4014803	Preparation of Co – operative Education	1(45)
4014804	Co – operative Education	6(540)

C: Free Elective Course (6 credits)

Freely choose any courses provided by the university. The courses chosen must not have been taken before by the student and must not be the compulsory non-credit courses.